# Complete Summary

## GUIDELINE TITLE

Surgical treatment of reflux esophagitis.

## BIBLIOGRAPHIC SOURCE(S)

Society for Surgery of the Alimentary Tract (SSAT). Surgical treatment of reflux esophagitis. Manchester (MA): Society for Surgery of the Alimentary Tract (SSAT); 2002. 4 p.

## GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates the previously issued version: Society for Surgery of the Alimentary Tract. Surgical treatment of reflux esophagitis. Manchester (MA): Society for Surgery of the Alimentary Tract; 2000. 4 p.

## COMPLETE SUMMARY CONTENT



## SCOPE

### DISEASE/CONDITION(S)

Reflux esophagitis with or without hiatal hernia

### GUIDELINE CATEGORY

Diagnosis
Evaluation
Management
Treatment

## CLINICAL SPECIALTY

Family Practice
Gastroenterology
Internal Medicine
Surgery

## INTENDED USERS

Physicians

## GUIDELINE OBJECTIVE(S)

To guide primary care physicians to the appropriate utilization of surgical procedures on the alimentary tract or related organs

## TARGET POPULATION

Adult patients with reflux esophagitis

## INTERVENTIONS AND PRACTICES CONSIDERED

### Diagnosis/Evaluation

1. Patient history, including evaluation of reflux symptoms
2. Flexible esophagoscopy (including barium esophagoscopy)
3. Esophageal manometry
4. Ambulatory 24-hour pH monitoring

### Treatment/Management

1. Lifestyle modifications: Avoidance of certain food and beverages, elevation of head of bed while sleeping, abstinence from smoking and alcohol
2. Pharmacotherapy: Antacids, $H_2$ receptor blockers, proton pump inhibitors (Note: Promotility drugs, including metoclopramide and domperidone are of little benefit in patients with severe reflux except in those with delayed gastric emptying.)
3. Surgery: Open or laparoscopic fundoplication, repair of hiatal hernia

## MAJOR OUTCOMES CONSIDERED

- Functional ability of lower esophageal sphincter
- Surgical complications, including postoperative respiratory complications
- Postoperative swallowing
- Length of hospital stay
- Relief of reflux symptoms
- Relapse rate

## METHODOLOGY

### METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

### DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Not stated

### NUMBER OF SOURCE DOCUMENTS

Not stated

### METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Not stated

### RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

### METHODS USED TO ANALYZE THE EVIDENCE

Review

### DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not applicable

### METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

### DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

The Society for Surgery of the Alimentary Tract (SSAT) guidelines are based on statements and recommendations that were overwhelmingly supported by clinical evidence. Each represents a consensus of opinion and is considered a reasonable plan for a specific clinical condition.

(See companion document Gadacz TR, Traverso LW, Fried GM, Stabile B, Levine BA. Practice guidelines for patients with gastrointestinal surgical diseases. J Gastrointest Surg 1998;2:483-484.)

### RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

### COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

### METHOD OF GUIDELINE VALIDATION

Internal Peer Review

### DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

The guidelines were reviewed by several committee members and then by the entire committee on several occasions. Each guideline was then sent back to the original author for final comment and reviewed again by the committee. Each guideline was approved by the Board of Trustees of the Society for Surgery of the Alimentary Tract and final comments were reviewed by the committee.

(See companion document Gadacz TR, Traverso LW, Fried GM, Stabile B, Levine BA. Practice guidelines for patients with gastrointestinal surgical diseases. J Gastrointest Surg 1998;2:483-484.)

## RECOMMENDATIONS

### MAJOR RECOMMENDATIONS

#### Symptoms

Gastroesophageal reflux (GERD) can usually be diagnosed by a careful history. Gastroesophageal reflux typically results in substernal burning discomfort or heartburn, which is often relieved by antacids. Some patients may also experience esophageal spasm with a squeezing chest pain that is often confused with angina. Refluxed material can be aspirated into the larynx, causing hoarseness, or into the tracheobronchial tree causing wheezing and coughing. Dysphagia may occur as a complication of chronic reflux.

#### Diagnosis

The diagnosis of GERD and the determination of the extent of damage to the esophageal epithelium may require a series of investigations. The mainstay of diagnosis is flexible esophagoscopy, in which demonstration of mucosal erosion or ulceration is evidence of reflux damage. Endoscopy is also essential in the diagnosis of Barrett's metaplasia (replacement of the normal squamous epithelium of the lower esophagus by intestinal type columnar cells). Barrett's esophagus, a consequence of chronic reflux, is associated with an increased risk of adenocarcinoma of the esophagus. Barium esophagography is a useful diagnostic test to evaluate for hiatal hernia, strictures, and esophageal shortening.

Esophageal manometry is important prior to planning surgery to evaluate lower esophageal sphincter function and peristaltic activity in the body of the esophagus. Impaired motor activity in the body of the esophagus may influence the choice of surgical procedure.

Ambulatory 24-hour pH monitoring can document reflux episodes by indicating a drop in esophageal pH to acid levels (less than 4.0). It is particularly useful in patients with atypical symptoms, or in those with typical symptoms but normal endoscopic findings.

## Treatment

Patients with typical gastroesophageal reflux symptoms should initially be managed by lifestyle modifications. Foods and beverages that can weaken the lower esophageal sphincter should be avoided, including chocolate, peppermint, fatty foods, coffee, and alcoholic beverages. Also to be avoided are foods and beverages that can irritate an inflamed esophageal mucosa, such as citrus fruits and juices, tomato products, and pepper. Elevation of the head while sleeping, not lying down immediately after meals, and abstinence from smoking are also helpful.

Medical therapy, including antacids, H-2 receptor blocking drugs, and proton pump inhibitors, is directed at reducing the acid content of refluxed material. Acid inhibition is most effectively achieved with proton pump inhibitors. Promotility drugs (including metoclopramide and domperidone) are of little benefit in patients with severe reflux symptoms unless they have delayed gastric emptying.

Although medical therapy is highly effective in controlling the signs and symptoms of gastroesophageal reflux, approximately 80% of patients will relapse within three months if therapy is discontinued, and up to 50% will require escalating doses of proton pump inhibitors.

## Indications for Surgery

Surgery should be considered for patients who do not respond to medical therapy, have complications of gastroesophageal reflux (such as a stricture), are noncompliant with medical therapy, or are totally dependent upon medical treatment to prevent recurrence of their symptoms. Some patients choose surgery due to the expense and inconvenience of long-term medical therapy and concern about the possible consequences of long-term acid suppression. The indications for surgery in patients with Barrett's esophagus are addressed in another SSAT guideline (See Barrett's Esophagus). There are several innovative endoscopic techniques aimed at treating reflux disease. The long-term effectiveness of these procedures has not been established.

Fundoplication may be more cost effective than long-term medical therapy, and it has been clearly shown to improve the patient's quality of life. The most common surgical procedures include those described by Nissen, Hill, Belsey, Dor, and Toupet. These techniques are designed to create a functional lower esophageal sphincter and to repair a hiatal hernia if present. The most common antireflux procedure is the Nissen fundoplication or a modification of this technique, which

involves mobilization and wrapping of the fundus of the stomach completely around the lower esophagus.

All surgical procedures incorporate some form of fundoplication, which is a wrap of the gastric fundus completely or partially around the distal esophagus. The Belsey procedure is performed through a thoracotomy and the others are usually performed using either open abdominal or laparoscopic approaches.

#### Qualifications for Performing Surgery for Gastroesophageal Reflux

The qualifications of a surgeon performing any operative procedure should be based on training (education), experience, and outcomes. At a minimum, laparoscopic or open fundoplication should be performed by surgeons who are certified or eligible for certification by the American Board of Surgery or the Royal College of Physicians and Surgeons of Canada, or their equivalent. When performing laparoscopic fundoplication, it is highly desirable that the surgeon have advanced laparoscopic skills.

### CLINICAL ALGORITHM(S)

None provided

## EVIDENCE SUPPORTING THE RECOMMENDATIONS

### TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is not specifically stated for each recommendation.

## BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

### POTENTIAL BENEFITS

- Medical therapy: Medical therapy is highly effective in controlling the signs and symptoms of gastroesophageal reflux; however, approximately 80% of patients will relapse within three months if therapy is discontinued, and up to 50% will require escalating doses of proton pump inhibitors.
- Surgical therapy: Limited data suggest that long-term outcome is equivalent after open or laparoscopic procedures, with less than 10% recurrence of reflux symptoms after fundoplication.
- Fundoplication may be more cost effective than long-term medical therapy, and it has been clearly shown to improve the patient's quality of life.

### POTENTIAL HARMS

#### Surgical Risks and Complications

- The most common risks associated with open or laparoscopic operations include bleeding or damage to structures such as the spleen, esophagus, or stomach. These complications occur at a rate of less than 5%. Respiratory

complications, such as atelectasis or pneumonia, are less frequent after laparoscopic surgery than after open upper abdominal surgery.

- Most patients will experience temporary difficulty in swallowing after surgery, especially with solid foods, but nearly all patients are able to swallow normally and eat an unrestricted diet by six weeks after surgery. A feeling of fullness (satiety) is another common but temporary occurrence. Gas-bloat syndrome, a sensation of bloating associated with inability to belch, may occur after fundoplication. Prior to surgery, in a subconscious effort to neutralize refluxed gastric acid with saliva, many patients with reflux esophagitis swallow frequently. Persistent aerophagia after surgery may cause bloating and increased flatus.

## CONTRAINDICATIONS

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## QUALIFYING STATEMENTS

### QUALIFYING STATEMENTS

These guidelines have been written by the Patient Care Committee of the Society for Surgery of the Alimentary Tract (SSAT). Their goal is to guide primary care physicians to the appropriate utilization of surgical procedures on the alimentary tract or related organs and they are based on critical review of the literature and expert opinion. Both of the latter sources of information result in a consensus that is recorded in the form of these Guidelines. The consensus addresses the range of acceptable clinical practice and should not be construed as a standard of care. These Guidelines require periodic revision to ensure that clinicians utilize procedures appropriately, but the reader must realize that clinical judgment may justify a course of action outside of the recommendations contained herein.

## IMPLEMENTATION OF THE GUIDELINE

### DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

## INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

### IOM CARE NEED

Getting Better
Living with Illness

### IOM DOMAIN

Effectiveness

## IDENTIFYING INFORMATION AND AVAILABILITY

### BIBLIOGRAPHIC SOURCE(S)

Society for Surgery of the Alimentary Tract (SSAT). Surgical treatment of reflux esophagitis. Manchester (MA): Society for Surgery of the Alimentary Tract (SSAT); 2002. 4 p.

### ADAPTATION

Not applicable: The guideline was not adapted from another source.

### DATE RELEASED

1996 (revised 2002 Oct 7)

### GUIDELINE DEVELOPER(S)

Society for Surgery of the Alimentary Tract, Inc - Medical Specialty Society

### SOURCE(S) OF FUNDING

Society of Surgery of the Alimentary Tract, Inc.

### GUIDELINE COMMITTEE

Patient Care Committee

### COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Not stated

### FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

### GUIDELINE STATUS

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This guideline updates the previously issued version: Society for Surgery of the Alimentary Tract. Surgical treatment of reflux esophagitis. Manchester (MA): Society for Surgery of the Alimentary Tract; 2000. 4 p.

### GUIDELINE AVAILABILITY

Electronic copies: Available from the Society for Surgery of the Alimentary Tract, Inc. Web site.

Print copies: Available from the Society for Surgery of the Alimentary Tract, Inc., 900 Cummings Center, Suite 221-U, Beverly, MA 01915; Telephone: (978) 927-8330; Fax: (978) 524-0461.

## AVAILABILITY OF COMPANION DOCUMENTS

The following is available:

- Gadacz TR, Traverso LW, Fried GM, Stabile B, Levine BA. Practice guidelines for patients with gastrointestinal surgical diseases. J Gastrointest Surg 1998;2:483-484.

Electronic copies: Not available at this time.

Print copies: Available from the Society for Surgery of the Alimentary Tract, Inc., 900 Cummings Center, Suite 221-0, Beverly, MA 01915; Telephone: (978) 927-8330; Fax: (978) 524-8890.

## PATIENT RESOURCES

None available

## NGC STATUS

This summary was completed by ECRI on March 28, 2000. The information was verified by the guideline developer as of May 30, 2000. This summary was updated on September 9, 2004.

## COPYRIGHT STATEMENT



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